



Membership DB for ePIC Status and Plans

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Membership DB Requirements Summary

[First Version](#) [Second Version](#)

“...**The ePIC collaboration requires robust tools for managing its membership effectively.** These tools must allow the Collaboration Council, in conjunction with the Membership Committee, to add or remove new member institutions along with their respective representatives on the Collaboration Council. The Membership Committee, in coordination with institutional representatives, will be responsible for maintaining the information pertaining to the collaboration's members within a specific institution.

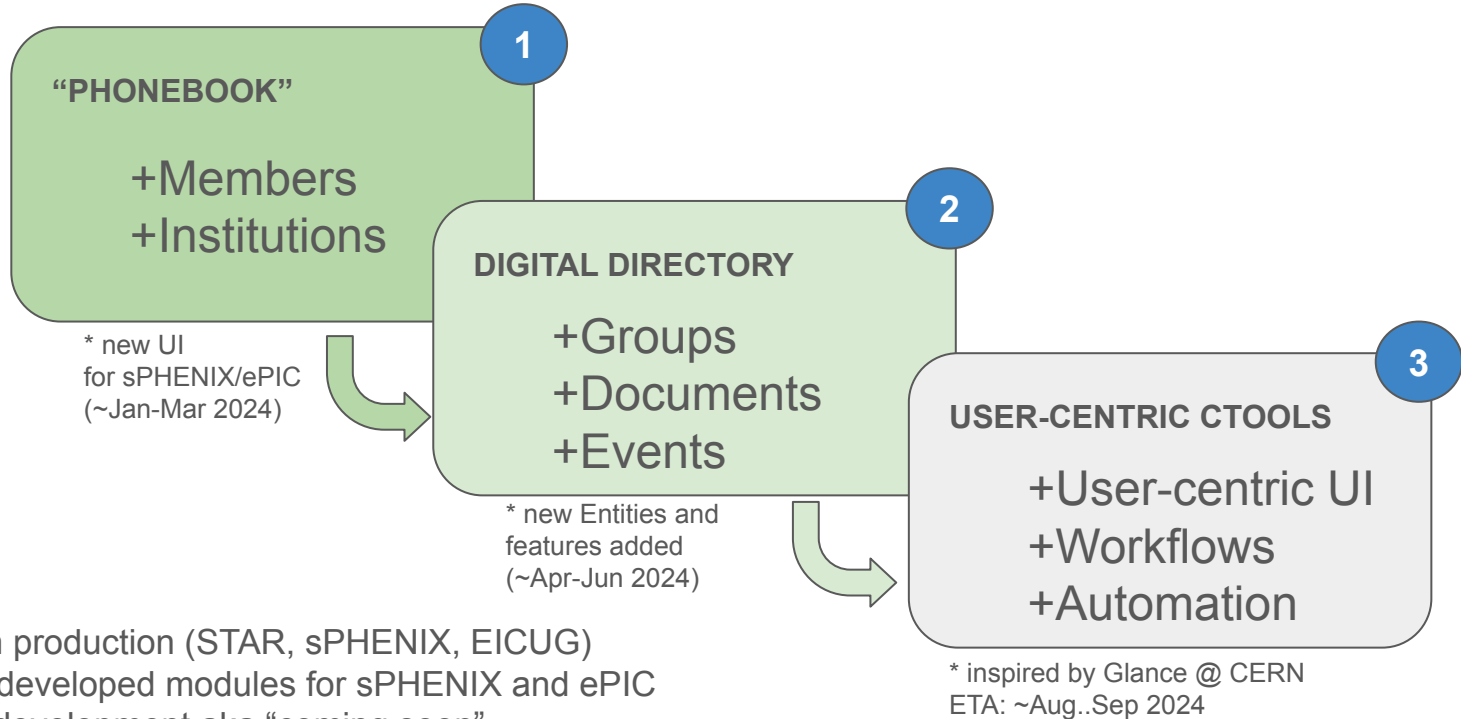
Accurate and up-to-date information about the collaboration's institutions and members is of paramount importance for facilitating collaborative work. Members must stay well-informed about ongoing projects and have a straightforward means of reaching out to one another for collaborative efforts. Equally essential is the management's ability to identify individuals involved in various working groups.

It is imperative that the selected tool and its setup affords the collaboration complete autonomy in managing its information, in accordance with the specifications outlined in the Collaboration Charter and the policies established by the Membership Committee.

The membership information will be used for approving plots, publications, and other collaboration document plots and determining authorship for publications. Therefore, it is vital that this information is easily accessible from other tools or seamlessly integrated into existing ones.

To address cybersecurity and privacy concerns, it is paramount that membership information remains protected and accessible solely for internal use within the collaboration...”

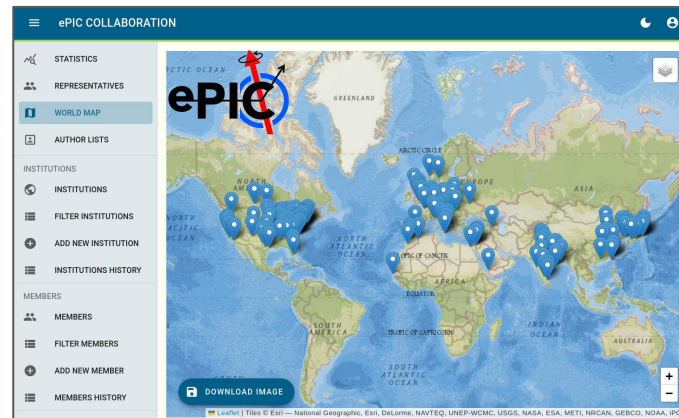
Membership DB: Development Path Overview



1. Service in production (STAR, sPHENIX, EICUG)
2. Recently developed modules for sPHENIX and ePIC
3. Ongoing development aka “coming soon”

Membership DB: Core Features

- Collaboration = Members + Institutions
 - Membership DB provides a convenient way of tracking Members and Institutions: Create / Read / Update / Deactivate.
 - preserves a history of changes for all records
 - generates author lists for a given date
 - Members are uniquely identified by ORCID, Institutions are uniquely identified by ROR ID.
- Service features:
 - manages Members and Institutions via the Entity-Attribute-Value model (EAV)
 - all phonebook fields are dynamic and are version-controlled (history of changes support). New fields could be configured on a fly, via the web interface, and are immediately available.
 - phonebook is a service: RESTful API and GraphQL API
 - clients: PhoneBook UI, Shift Signup, Online QA System, Disk Space allocators, Document Management System, etc.
 - trouble-free integration with dependent services



The screenshot shows the 'ePIC COLLABORATION' Institutions table. The table lists institutions with columns for Full Name, Short Name, Country, and Region. The table includes entries for A. I. Alikhant National Science Laboratory, Abilene Christian University, AGH University of Science and Technology, Aligarh Muslim University, Argonne National Laboratory, Augustana University, Banaras Hindu University, Baruch College, City University of New York, Ben Gurion University of the Negev, and Brookhaven National Laboratory.

FULL NAME OF THE INSTITUTION	SHORT NAME	COUNTRY	REGION
A. I. Alikhant National Science Laboratory	YERPHI	ARMENIA	ASIA
Abilene Christian University	ACU	US	NORTH AMERICA
AGH University of Science and Technology	AGH	PL	EUROPE
Aligarh Muslim University	AMU	IN	ASIA
Argonne National Laboratory	ANL	US	NORTH AMERICA
Augustana University	AUGIE	US	NORTH AMERICA
Banaras Hindu University	BHU	IN	ASIA
Baruch College, City University of New York		US	NORTH AMERICA
Ben Gurion University of the Negev	BGU	IL	ASIA
Brookhaven National Laboratory	BNL	US	NORTH AMERICA

Service Integration: REST + GraphQL API

- Phonebook is a REST / GraphQL service:
 - all data is accessible via HTTP calls, JSON format
 - standard way of service integration, cross-platform, cross-language
 - no need to query “a” database or know the specific format of the data source
- GraphQL API:
 - modern replacement for REST
 - flexible, simplifies the integration process
 - allows to avoid overfetching => lower latency
 - all needed data fetched via a single request
 - supports data filtering

```
curl -s \  
  --header "Content-Type: application/json" \  
  --request POST \  
  --url https://phonebook.sdcc.bnl.gov/graphql/ePIC/ \  
  --data '{"query": "query {  
members{id,name_first,name_last,email,institution{id,name_full,n  
ame_short}}", "variables": { "filters": [ { "field": "name_first", "op":  
"fuzzy", "val": "tomas" } ] } }'
```

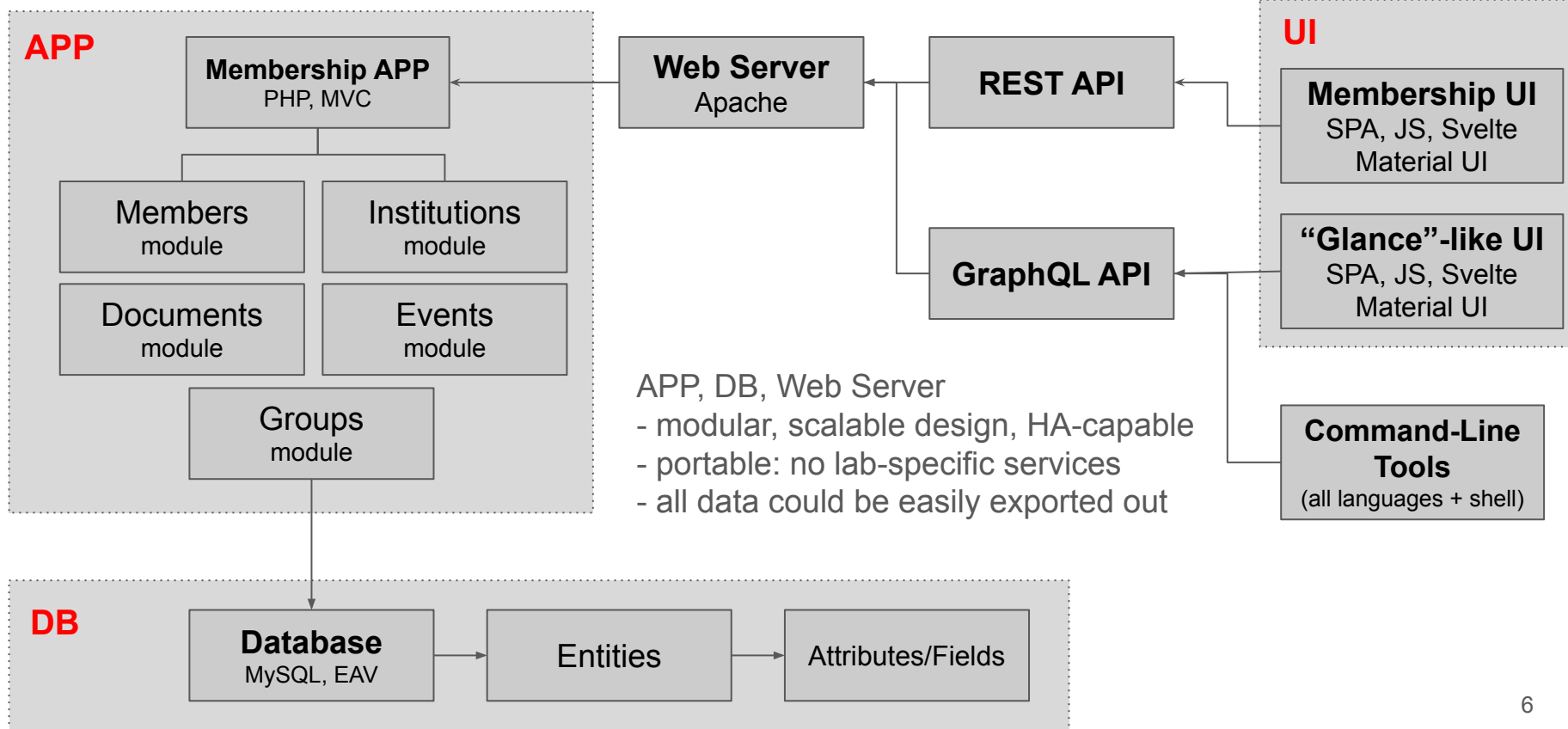


GraphQL API: unix shell example

```
import requests  
import json  
  
url = "https://phonebook.sdcc.bnl.gov/graphql/ePIC/"  
body = """  
{  
  members{ id, orcid_id, name_first, name_last, email  
            institution{ id, ror_id, name_full, name_short }  
  }  
}  
"""  
  
response = requests.post(url=url, json={"query": body}).  
if response.status_code == 200:  
    print( json.dumps(response.json()) )
```

Membership DB: Implementation Details

https://github.com/dmarkh/epic_phonebook_mui MIT License



Manage Institutions and Members of ePIC online: browse, add, edit

Quick Search Fuzzy Search **BULK IMPORT** **BULK UPDATE**

FULL NAME OF THE INSTITUTION	SHORT NAME	COUNTRY	REGION
A. I. Alikhantan National Science Lab			
Abilene Christian University			
AGH University of Science and Techn			
Aligarh Muslim University			
Argonne National Laboratory			
Augustana University			
Banaras Hindu University			

Bulk Import / Update from XLSX supported

Quick/Fuzzy Search, or Configurable Filtering

Quick Search Fuzzy Search **BULK IMPORT** **BULK UPDATE**

FIRST NAME	LAST NAME	EMAIL	INSTITUTION
Raktim	Abir	raktim.ph@amu.ac.in	Aligarh Muslim University
Kevin	Adkins	jkadkins@moreheadstate.edu	Morehead State University
Christine	Aidala	caidala@umich.edu	University of Michigan
Ayman	Al-bataineh	abataineh@yu.edu.jo	Yarmouk University
Pietro	Antonoli	pietro.antonoli@bo.infn.it	INFN Sezione di Bologna and Dipartimento di Fisica e Astron
Miguel	Arratia	miguel.arratia@ucr.edu	University of California, Riverside
John	Arrington	JArrington@lbl.gov	Lawrence Berkeley National Laboratory

Search, Import/Export to Excel...

ePIC COLLABORATION

FILTER MEMBERS

FILTERS

Match ALL criteria Match ANY criteria

FIELD: M: Last Name OPERATION: is not empty VALUE: + -

DISPLAY FIELDS

FIELD: M: ID + -

FIELD: M: ORCID + -

FIELD: M: First name + -

FIELD: M: Last Name + -

FIELD: M: E-mail address + -

SORT FIELDS (ORDER MATTERS)

FIELD: I: Full name of the institution + -

FIELD: M: Last Name + -

FIELD: M: First name + -

APPLY FILTERS

Filter using configurable conditions, select desired output fields, apply specific sort order, export the resulting list to Excel

FILTERED MEMBERS:

	First name	Last Name	E-mail address	Full name of the institution
001-7198-7402	Larry	Isenhower	ldi00a@acu.edu	Abilene Christian University
002-9235-2649	Mariusz	Przybycien	mariusz.przybycien@agh.edu.pl	AGH University of Science and T
002-9334-9871	Raktim	Abir	raktim.ph@amu.ac.in	Aligarh Muslim University
003-4947-877X	Sylvester	Joosten	sjoosten@anl.gov	Argonne National Laboratory
001-9450-2914	Zein-Eddine	Meziani	zmeziani@anl.gov	Argonne National Laboratory
2804	Stefan	Bathe	stefan.bathe@baruch.cuny.edu	Baruch College, City University o
2805	Zvi	Citron	zhcitra@bgu.ac.il	Ben
2971	Peter	Steinberg	steinberg@bnl.gov	Bro

← BACK TO FILTERS

EXPORT TO EXCEL

Configurable Entity Fields: add new fields on demand

The screenshot shows the 'ePIC COLLABORATION' interface. The sidebar on the left contains the following menu items:

- INSTITUTIONS
 - FILTER INSTITUTIONS
 - ADD NEW INSTITUTION
- MEMBERS
 - MEMBERS
 - FILTER MEMBERS
 - ADD NEW MEMBER
- DESCRIPTORS
 - INSTITUTION FIELDS
 - MEMBER FIELDS** (highlighted)
 - INSTITUTION FIELDGRO...
 - MEMBER FIELDGROUPS

The main content area is titled 'MEMBER FIELDS' and contains a table with the following data:

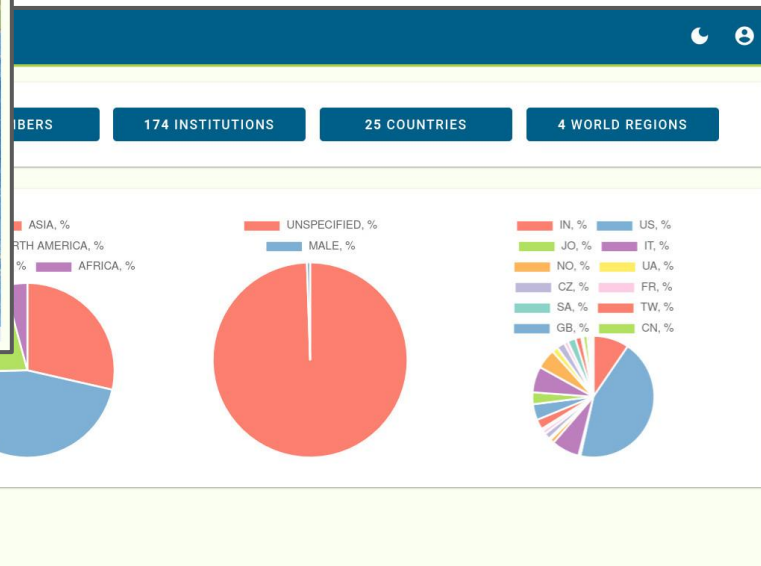
ID	WEIGHT	NAME FIXED	DESCRIPTION	GROUP	IS REQUIRED
1	0	name_first	First name	user name	YES
2	1	name_initials	Initials	user name	NO
3	2	name_last	Last Name	user name	YES
4	3	name_latex	Latex Last Name	user name	NO
5	4	name_unicode	Unicode name	user name	NO
6	5	inspire_id	Inspire ID	user name	NO
7	6	gender	Gender	user name	NO
89	8	person_category	Area	user name	

A blue button labeled 'CREATE NEW FIELD' is located at the bottom right of the table area. Two orange arrows point to the 'MEMBER FIELDS' menu item and the 'CREATE NEW FIELD' button.

World Map, Statistics...



Statistics graphs: need a list of desired plots from ePIC management. Note: currently presented stats are using ePIC representative data only, as member data is not yet uploaded.



World Map uses Latitude/Longitude fields defined for Institutions

Photo upload, Member/Institution deactivation...

The screenshot displays the 'ePIC COLLABORATION' web application. On the left is a navigation sidebar with categories: STATISTICS, REPRESENTATIVES, WORLD MAP, AUTHOR LISTS, INSTITUTIONS (including INSTITUTIONS, FILTER INSTITUTIONS, ADD NEW INSTITUTION, INSTITUTIONS HISTORY), MEMBERS (including MEMBERS, FILTER MEMBERS, ADD NEW MEMBER, MEMBERS HISTORY), and GROUPS. The main content area shows a member profile for a 'Representative' with fields for 'Is shifter', 'Is emeritus', 'Is expert', 'Area of expertise', 'Expert credit', and 'Certified for offline QA'. A 'CHANGE PHOTO' button is visible. A modal window titled 'PHOTO UPLOAD' is open, showing a file named 'photo.jpg' and a preview of a man's photo. At the bottom of the modal are 'CANCEL' and 'APPLY CHANGE' buttons. Below the profile, there is a 'TOGGLE STATUS (ACTIVE/INACTIVE)' button and an 'UPDATE RECORD' button. Two orange arrows point to the 'MEMBERS' and 'MEMBERS HISTORY' items in the sidebar.

Recently added: Groups

Current implementation:

- Members can now form Groups
- Members could be assigned Roles within Groups
- Groups have the “Category” tag
- (optional) Groups can be made private or public
- (optional) Groups have email - reserved for mailing list integration
- (optional) hierarchy support via “parent group”

Future development:

- Mailing list integration
- Access Control integration
- Document Management Integration

The screenshot displays the 'ePIC COLLABORATION' interface. The top navigation bar includes 'VIEW', 'EDIT', 'MEMBERS', and 'ROLES' options. The main content area is titled 'GROUP:' and contains a form with the following fields:

NAME	Publications (Documents)
DESCRIPTION	InvenioRDM group for public documents
EMAIL	
PRIVACY	PUBLIC

Below the form is the 'GROUP ROLES' section, which includes a table with the following data:

NAME
Administrator
Publisher

The 'MEMBERS' section at the bottom features a table with the following data:

ROLE	NAME	EMAIL	INSTITUTION
Publisher	Renee Fatemi	rhfate2@g.uky.edu	University of Kentucky

Groups link to Members

Recently added: Events (meetings/conferences)

Current implementation:

- Members can submit Events
- Events have mandatory fields
 - Title
 - Date (begin/end)
- Events have configurable Optional fields (just like Members, Institutions, etc)
- Events could be referenced by Documents

Future development:

- Event Management System Integration (e.g. with Indico)
- Workflow Management Integration
- Mailing Lists Integration (e.g with Discourse)

The screenshot displays the 'ePIC COLLABORATION' interface for editing a 'Test Event'. The left sidebar contains navigation options: ADD NEW MEMBER, MEMBERS HISTORY, GROUPS (ADD NEW GROUP), DOCUMENTS (DOCUMENTS, FILTER DOCUMENTS, ADD NEW DOCUMENT), EVENTS (EVENTS, FILTER EVENTS, ADD NEW EVENT), and DESCRIPTORS (INSTITUTION FIELDS). The main form area includes: 'Event's name*' (Test Event), 'ORGANIZERS' (Ullrich, Thomas and Aldala, Christine), 'ADD ORGANIZER' button, 'Start time of the event*' (07/06/2024, 10:30 AM), 'End time of the Event' (mm/dd/yyyy, --:-- --), 'Description of the event' (Test Event Description), 'Event URL' (http://foo.bar/), and 'Event's location' (Test Event Location). A blue 'UPDATE RECORD' button is located at the bottom right. A red arrow points to the 'ADD ORGANIZER' button.

Events link to Members

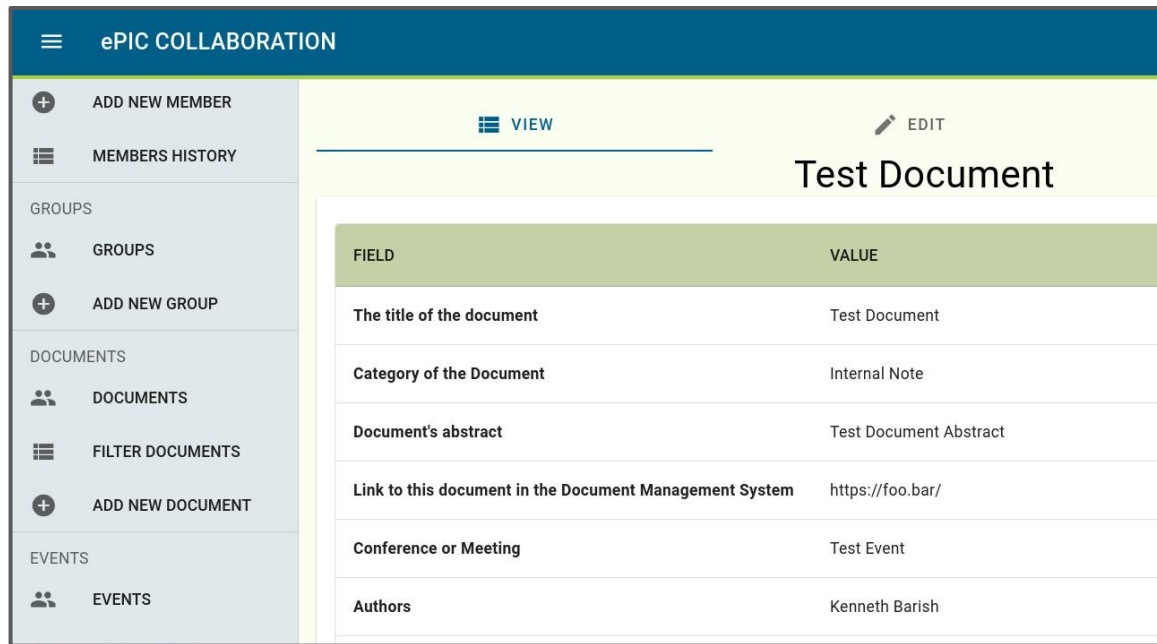
Recently added: Documents

Current implementation:

- Members can submit Documents
- Documents have preconfigured fields:
 - Title
 - Category,
 - Abstract
 - Link to the Document Management System
- Optional fields:
 - Conference (via Events module)
 - Authors / Presenters (via Members module)
- More fields could be added - it is totally configurable!

Future development:

- Workflow Integration



The screenshot displays the 'ePIC COLLABORATION' interface. On the left is a navigation sidebar with sections: MEMBERS (ADD NEW MEMBER, MEMBERS HISTORY), GROUPS (GROUPS, ADD NEW GROUP), DOCUMENTS (DOCUMENTS, FILTER DOCUMENTS, ADD NEW DOCUMENT), and EVENTS (EVENTS). The main content area shows a 'Test Document' form with a 'VIEW' button and an 'EDIT' button. The form contains the following fields and values:

FIELD	VALUE
The title of the document	Test Document
Category of the Document	Internal Note
Document's abstract	Test Document Abstract
Link to this document in the Document Management System	https://foo.bar/
Conference or Meeting	Test Event
Authors	Kenneth Barish

Documents link to Members and Events

Ongoing Development: User-Centric UI, Workflows

Inspired by Glance project @ CERN

Provides user-centric view into the Digital Directory of the Collaboration

As a member, can I see my institution/co-members/documents/groups/events that reference me or are related to me? What can I do? How do I submit new document, review existing document, join group, submit changes to own profile?

Automates the Document Workflow Management

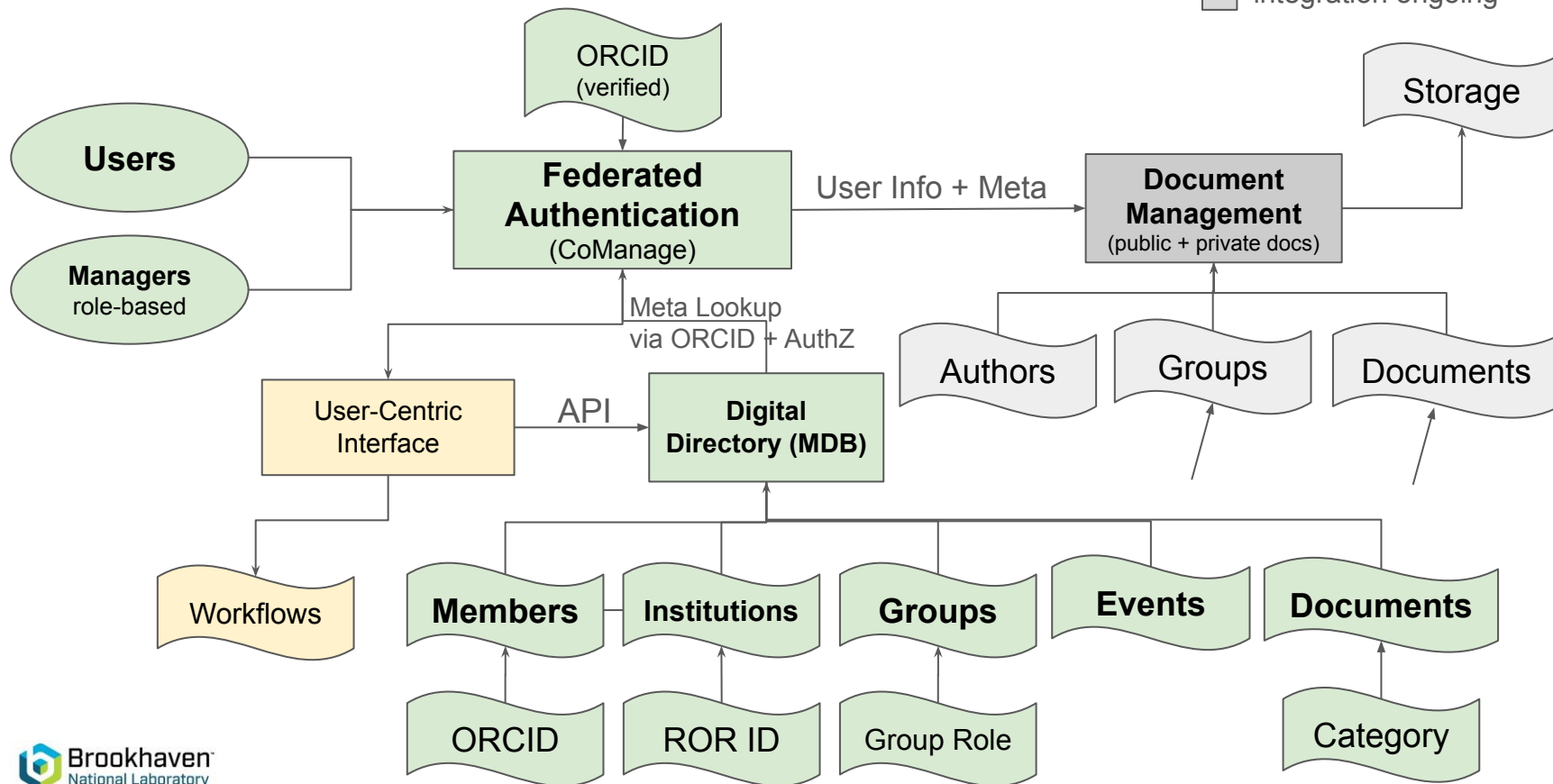
Workflow engine will handle both internal and public documents related to the experiment. This engine will manage the process of document release, from the draft level to final approval, including the review process (editorial boards, public meetings, etc...). The workflows will vary depending on the type of document, and the engine will be configurable to accommodate the ePIC experiment's structure and other organizational processes. The Workflow Engine will maintain references to external repository (Indico, events)

Estimated development time

1-2 months from today (incl.testing), depending on the provided feedback by ePIC collaboration managers and members (volunteers)

MDB Deployment Diagram as of 2024-07-03

- Implemented and deployed
- under development
- integration ongoing



Membership DB for ePIC: Summary and Outlook

- **Priorities**
 - The ePIC collaboration identified a high-priority need for developing a digital directory accessible through federated identity mechanisms for global collaborators. This directory has been successfully delivered and incorporates essential features for disambiguation, such as identifying institutes through their ROR identity and individuals through their ORCID identifier.
- **Readiness Status**
 - Membership DB for ePIC is deployed and ready for use <https://phonebook.sdcc.bnl.gov/ePIC>
 - Modules available today: Members, Institutions, Groups, Documents, Events
 - Need more data from ePIC: full list of Members, list of Groups, etc.
- **Federated Authentication**
 - Authentication for accessing related web services has been implemented using the CoManage software centralized tool, which is synchronized with the Digital Directory. Members can log in using the institution ID, merge accounts from multiple institutions, add ORCID to your CoManage record.
 - CoManage does Membership DB metadata lookups via ORCID match, and exports it to interested services (integration)
- **Ongoing/Future development (2024-2025)**
 - User-Centric UI: user-related tasks (unlike management tasks of the core MDB)
 - Document Workflows: automate document reviews
 - Integration with external tools: mailing lists (Discourse? Mailman? Sympa?), events (Indico), ...

